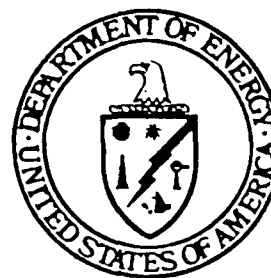


MONTICELLO REMEDIAL ACTION PROJECT (MRAP)



INFORMATION UPDATE

November 1989

This is the first in a series of information updates that the U.S. Department of Energy (DOE) will develop throughout the course of cleanup activities being conducted at the Monticello Remedial Action Project (MRAP) Site. The purpose of these updates is to keep the community informed of the actions being taken by the DOE.

Background

Monticello is located in San Juan County, which occupies the southeastern corner of Utah. The town lies in the Paradox Basin just east of the Abajo Mountains and north of Montezuma Creek.

The millsite, covering a 78-acre tract, is located south of the town of Monticello in a gently sloped alluvial valley formed by Montezuma Creek, a small intermittent stream with headwaters in the Abajo Mountains.

Millsite History

The original Monticello mill was financed through its agent, the Defense Plant Corporation, to provide an additional source of vanadium needed during World War II. The Vanadium Corporation of America operated the mill for the government between 1942 and 1944, and privately under a lease from the government from 1944 to 1946. The U.S. Atomic Energy Commission (AEC) reactivated the mill in 1948 and engaged the Galigher Company to rebuild it. The mill was operated for the AEC from 1949 to 1956 by the Galigher Company, and from 1956 through 1959 by the National Lead Company, under contracts to produce both uranium and vanadium. During the years following the AEC takeover of the mill, uranium was the primary product. Mill operations were terminated in January 1960, and the plant was dismantled and excessed by the end of 1964. The mill-tailings piles were stabilized over the period 1961 to 1962 to prevent further contamination through erosion. Part of the land was transferred to the City of Monticello and to the Bureau of Land Management, but otherwise the site has remained under the control of the AEC and its successor agencies, the U.S. Energy Research and Development Administration (ERDA) and the U.S. Department of Energy (DOE).

Need for Remediation

The tailings and associated contaminated material present a potential threat to human health and the environment. Potential adverse health effects are due to leaching and migration of trace elements into surface and ground waters and exposure to gamma radiation and radon gas from tailings.

Operable Units Definition

Due to the complexity of the Monticello Millsite, the Department of Energy has divided the work into three manageable components called "Operable Units." Operable units are used to differentiate the types of properties or kinds of contaminated materials and to provide a means for developing and evaluating alternatives for remedial action for each operable unit.

Operable Unit I - Tailings

Operable Unit I includes the 78 acres of the millsite and the tailings impoundment areas, the tailings removed from the peripheral properties, and the tailings removed from Monticello Vicinity Properties. The tailings piles are within the floodplain of Montezuma Creek. They are also partially in contact with a shallow alluvial aquifer underlying the site.

Contamination from the millsite was spread to the local community and properties peripheral to the site. Tailings were also used as fill for open lands; backfill around water, sewer and electrical lines; sub-base for driveways, sidewalks, and concrete slabs; backfill against basement foundations; and as sand mix in concrete, plaster and mortar. Tailings used for these purposes are located on properties identified as "vicinity properties." Mill tailings at vicinity properties are being remediated under a separate action.

Inclusion of vicinity properties and peripheral properties mill tailings under Operable Unit I refers to final disposal of those materials. An estimated 1.5 million cubic yards of tailings and contaminated substrate exist on the millsite. Peripheral properties contain an estimated additional 300,000 cubic yards of contaminated material, while vicinity properties account for an estimated 100,000 cubic yards.

Scope of Remediation for Operable Unit I

Remedial action associated with Operable Unit I would prevent the tailings from future contamination of air, surface soil and groundwater. The tailings must be removed from their present location where they are in contact with the groundwater. Stabilization would occur adjacent to the existing site or off-site by capping a designed disposal cell with a clay or multimedia cap. Dust control measures and access restrictions would be used to protect public health. To control runoff, diversion structures would be built with collected water treated by evaporation ponds or reverse osmosis. Treated water would be discharged to Montezuma Creek. Contaminated residual sludges from either of the treatment systems would be disposed of at a licensed repository. Upon completion of remedial action, the millsite and repository site would be revegetated.

Operable Unit II - Peripheral Properties

Tailings were also dispersed by wind to land adjacent to the millsite, and have contaminated the surface soils and groundwater of peripheral properties downgradient from the site.

Peripheral properties include: pasture land, including mesa irrigated, hilltop dryland and creek bottom pasturage; hillsides, including dense vegetation, and low vegetation areas; the Monticello Cemetery; the Bureau of Land Management Compound; and Montezuma Creek, including the upper creek bank and creek bed, and the lower creek.

Scope of Remediation for Operable Unit II

Tailings would be removed from peripheral properties to eliminate current radiation exposure to the public. Using conventional construction equipment, the peripheral properties tailings would be excavated and placed on the existing tailings pile for eventual disposal. Revegetation would occur after remediation. Supplemental standards (leaving some or all of the tailings in place) could be applied in areas where remedial action would cause undue environmental damage or the costs of remedial action would be unreasonably high in comparison to the derived environmental and health benefits. For some areas where supplemental standards could apply, access restrictions would be used to control the use of the land to prevent future exposure.

Operable Unit III - Groundwater

Operable Unit III includes all of the alluvial groundwater beneath the tailings pile and extending one mile downstream. The alluvial aquifer is in direct hydraulic contact with Montezuma Creek. It is not used as a private or public drinking water source and is separated by two barriers from the deeper Burro Canyon aquifer. The Burro Canyon aquifer, which is currently used as a drinking water supply has not been contaminated. The total water volume that is contaminated is estimated to be approximately 163 acre-feet. An acre-foot of water is equivalent to 325,000 gallons.

Scope of Remediation for Operable Unit III

Groundwater remediation is intended to eliminate existing contamination once the source (the tailings) are removed. Both active and passive treatment technologies have been evaluated. Active groundwater treatment would, based on preliminary studies, involve the use of wells and/or drains to collect the groundwater followed by treatment by reverse osmosis or using evaporation ponds. Discharge of water treated by reverse osmosis would be to Montezuma Creek. Contaminated residual sludges from either of the treatment methods would require disposal at a licensed repository. During the time treatment takes place, institutional controls would be used to limit access to groundwater use. Upon completion of the groundwater restoration, the treatment site would be revegetated and made available for unrestricted use.

Passive treatment of groundwater is also an acceptable alternative and would entail natural flushing of the alluvial aquifer over a 60-year time period with institutional controls to limit access to groundwater use.

Current Project Status

Concern regarding the potential health hazards that result from exposure to radiation emanating from uranium mill tailings and from contaminated structures in the vicinity of such sites (at "vicinity properties" and "peripheral properties") prompted the Department of Energy to undertake remedial action to prevent or minimize this type of environmental hazard.

The DOE, under the authority of the Atomic Energy Act, initiated the Surplus Facilities Management Program (SFMP) in 1978 to assure safe caretaking and decommissioning of government facilities that had been retired from service but which still had radioactive contamination. In 1980, the Monticello Millsite was accepted into the SFMP, and the Monticello Remedial Action Project (MRAP) was established to restore the government-owned millsite to safe levels, and to dispose of or contain the tailings in an environmentally-safe manner.

The Superfund Amendment and Reauthorization Act of 1986 (SARA) placed the SFMP activities at Monticello under the regulatory framework of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - commonly known as Superfund.

In December of 1988, the DOE entered into a Federal Facility Agreement with the U.S. Environmental Protection Agency (EPA) and the State of Utah for the remediation of the Monticello Vicinity Properties and the Monticello Millsite according to Superfund protocol.

Public Involvement

The DOE has prepared a Remedial Investigation/Feasibility Study (RI/FS) and a Proposed Plan for the three Operable Units of the Monticello Millsite in accordance with Superfund. The RI/FS and Proposed Plan have now been released for public review and comment. The public review and comment period runs from October 27 through November 25, 1989. Copies of the RI/RS and Proposed Plan are available for public review as part of the Administrative Record kept at the San Juan County Public Library in Monticello, Utah.

Following the public comment period, a Responsiveness Summary will be prepared addressing all public comments. The Department of Energy will then recommend and the EPA will adopt a Record of Decision for remedial action at the Monticello Millsite.

For More Information

If you have questions or need more information, please contact:

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Grand Junction, CO 81502
(303) 248-6015

Collect calls will be accepted between 8:00 AM and 4:30 PM weekdays.

Administrative Record/Information Centers

Copies of applicable documents relating to the Monticello Vicinity Properties cleanup and the Monticello Remedial Action Project are available for public review at:

Administrative Record Center:

San Juan County Public Library
80 North Main Street
Monticello, UT 84535
(801) 587-2281

Information Centers:

U.S. Department of Energy
Grand Junction Projects Office
2597 B 3/4 Road
Grand Junction, CO 81503
(303) 248-6000

U.S. EPA Region VIII Library
999 18th Street, 2nd Floor
Denver, CO 80202-2405

State of Utah Department of Health
288 North 1460 West, 3rd Floor
Salt Lake City, UT 84116-0690